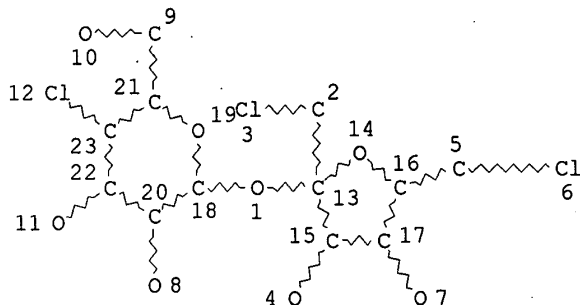


L Number	Hits	Search Text	DB	Time stamp
1	1126	sucralose	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:41
2	253	sucralose and purif\$	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:41
3	251	(sucralose and purif\$) and (aqueous or water or extract\$)	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:42
7	0	(((((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)) and crystalliz\$) and (batch or continuous or countercurrent)) and tetrachlorosucrose	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:48
8	0	(((((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)) and crystalliz\$) and (batch or continuous or countercurrent)) and (tetrachlorogalactotagatose or tetrachlorogalactosucrose)	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:51
9	0	(((((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)) and crystalliz\$) and (batch or continuous or countercurrent)) and (hildebrand ADJ parameter)	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:51
6	18	(((((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)) and crystalliz\$) and (batch or continuous or countercurrent))	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:51
5	23	((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)) and crystalliz\$	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:54
4	56	((sucralose and purif\$) and (aqueous or water or extract\$)) and (ethyl ADJ acetate)	USPAT; US-PGPUB; EPO; DERWENT	2003/05/28 20:55

May 28, 2003

L2 STR



GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 23

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STEREO ATTRIBUTES: NONE
L3      15 SEA FILE=REGISTRY FAM FUL L2
L8      5019 SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLVENT EXTRACTION/CT
L16     59260 SEA FILE=HCAPLUS ABB=ON  PLU=ON  EXTRACTION+NT/CT
L23      7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (SUCRALOSE OR L3) AND (L16 OR
      L8 OR (LIQUID OR SOLVENT) (2A) EXTRACT?)
L24      1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ETHYL ACETATE/CN
L25      6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (SUCRALOSE OR L3) AND (L24 OR
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L26     11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L23 OR L25
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L26 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:964107 HCAPLUS  
DOCUMENT NUMBER: 138:24019  
TITLE: Taste modifiers comprising a chlorogenic acid  
INVENTOR(S): Chien, Mingijen; Haesusler, Alex; Van Leersum, Hans  
PATENT ASSIGNEE(S): Givaudan SA, Switz.  
SOURCE: PCT Int. Appl., 25 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100192	A1	20021219	WO 2002-CH315	20020612
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
 UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
 TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003003212 A1 20030102 US 2001-880420 20010613

PRIORITY APPLN. INFO.: US 2001-880420 A 20010613

AB To a consumable comprising an ingredient or ingredients that cause an off-taste in the consumable is added chlorogenic acid in a concn. sufficient to mask or modify the off-taste. The chlorogenic acid may be supplied as an ext. from a botanical source obtained by extn. at 30-80.degree.C with water and/or a polar org. solvent. The method of making an off-taste by addn. of a chlorogenic acid to a consumable is also claimed.

IC ICM A23L001-221

ICS A23L001-226; A61K035-78; A61K031-215

CC 17-6 (Food and Feed Chemistry)

Section cross-reference(s): 11, 63

IT Alcoholic beverages

Bakery products

Beverages

Cocoa products

Coffee products

Confectionery

Dairy products

Drugs

**Extraction**

Food additives

Meat

Meat substitutes

Milk substitutes

**Solvent extraction**

Sweetening agents

Tea products

Tobacco products

(taste modifiers comprising chlorogenic acid)

IT 57-55-6, Propylene glycol, biological studies 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-63-0, 2-Propanol, biological studies 67-64-1, Acetone, biological studies 71-23-8, n-Propanol, biological studies 7732-18-5, Water, biological studies

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(extn. solvent; taste modifiers comprising chlorogenic acid)

IT 67-66-3, Chloroform, biological studies 71-36-3, Butanol, biological studies 75-09-2, Dichloromethane, biological studies 108-88-3, Toluene, biological studies 110-54-3, Hexane, biological studies 110-82-7, Cyclohexane, biological studies 141-78-6,

**Ethyl acetate**, biological studies 142-82-5, Heptane,

biological studies 1634-04-4, Methyl tert-butyl ether

RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)

(phase sepn. solvent; taste modifiers comprising chlorogenic acid)

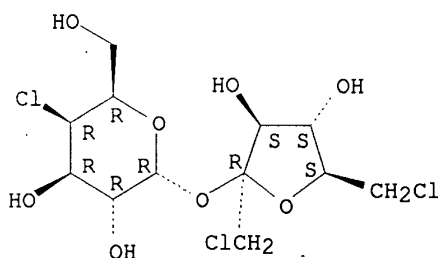
IT 81-07-2, Saccharin 81-07-2D, Saccharin, salts 87-99-0, Xylitol 100-88-9, Cyclohexylsulfamic acid 100-88-9D, Cyclamate, derivs.

327-97-9D, 3-O-Caffeoylquinic acid, derivs. 905-99-7, 4-O-Caffeoylquinic acid 906-33-2, 5-O-Caffeoylquinic acid 1083-30-3D, Dihydrochalcone, derivs. 1899-29-2, 3-O-Feruloylquinic acid 1899-30-5, 3-p-Coumaroylquinic acid 2450-53-5, 3,5-Dicaffeoylquinic acid 2613-86-7, 4-O-Feruloylquinic acid 14534-61-3, 3,4-Dicaffeoylquinic acid 22839-47-0, Aspartame 22839-47-0D, Aspartame, salts 32451-86-8, 5-p-Coumaroylquinic acid 40242-06-6, 5-O-Feruloylquinic acid 53539-37-0, 4-p-Coumaroylquinic acid 55589-62-3, Acesulfame potassium 56038-13-2, **Sucralose** 57378-72-0, 4,5-Dicaffeoylquinic acid 57817-89-7D, Stevioside, derivs. 80863-62-3, Alitame 125132-81-2 165450-17-9, Neotame 478156-24-0 478156-25-1  
 RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (taste modifiers comprising chlorogenic acid)  
 IT **141-78-6, Ethyl acetate**, biological studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (phase sepn. solvent; taste modifiers comprising chlorogenic acid)  
 RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac

IT **56038-13-2, Sucralose**  
 RL: BSU (Biological study, unclassified); FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (taste modifiers comprising chlorogenic acid)  
 RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:951562 HCAPLUS  
 DOCUMENT NUMBER: 138:136749  
 TITLE: Parametrization Strategy for the MolFESD Concept:  
 Quantitative Surface Representation of Local  
 Hydrophobicity  
 AUTHOR(S): Jaeger, Robert; Kast, Stefan M.; Brickmann, Juergen  
 CORPORATE SOURCE: Institut fuer Physikalische Chemie, Technische

SOURCE: Universitaet Darmstadt, Darmstadt, 64287, Germany  
 Journal of Chemical Information and Computer Sciences  
 (2003), 43(1), 237-247  
 CODEN: JCISD8; ISSN: 0095-2338

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The authors derive a new model for the established concept of the mol. free energy surface d. (MolFESD) yielding a more rigorous representation of local surface contributions to the overall hydrophobicity of a mol. The model parametrization makes efficient use of both local and global information about solvation thermodyn., as formulated earlier for the problem of predicting free energies of hydration. The free energy of transfer is sepd. into an interaction contribution and a term related to the cavity formation. Interaction and cavity components are obtained from the statistical three-dimensional (3D) free energy d. and a linear combination of surface and vol. terms, resp. An appropriate mol. interaction field generated by the program Grid is used as an approx. representation of the interaction part of the 3-dimensional free energy d. The authors further compress the 3-dimensional d. by a linear combination of localized surface functions allowing for the derivation of local hydrophobic contributions as a free energy surface d. For a set of 400 compds. model yields significant correlation ( $R^2 = 0.95$ ,  $\sigma = 0.57$ ) between exptl. and calcd. log P values. The final model is applied to establish a correlation between partial free energies of transfer for sucrose derivs. and their relative sweetness, as studied earlier in the group of the authors. The authors find considerable improvement regarding the root-mean-square error of the regression thus validating the presented approach.

CC 22-2 (Physical Organic Chemistry)  
 Section cross-reference(s): 6, 33, 68, 69

IT **Partition**  
 (octanol/water; quant. surface representation of local hydrophobicity and parametrization strategy for MolFESD concept)

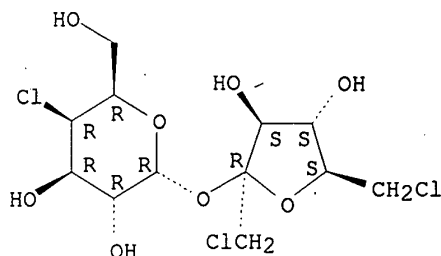
IT 57-50-1, Sucrose, properties 50270-99-0 55832-24-1 **56038-13-2**  
 56038-27-8 61854-83-9, 1',6'-Dichlorosucrose 64644-62-8,  
 1'-Chlorosucrose 64644-65-1 82950-43-4 86172-15-8 86172-21-6  
 86172-29-4 86172-31-8 86172-32-9 86172-45-4 86172-47-6  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)  
 (sweetness and transfer free energy vs. partition coeff.; quant. surface representation of local hydrophobicity and parametrization strategy for MolFESD concept)

IT **56038-13-2**  
 RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
 (Biological study)  
 (sweetness and transfer free energy vs. partition coeff.; quant. surface representation of local hydrophobicity and parametrization strategy for MolFESD concept)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:888451 HCAPLUS  
 DOCUMENT NUMBER: 137:369113  
 TITLE: Anticariogenic confectionery compositions providing enhanced oral care benefits  
 INVENTOR(S): Lawlor, Thomas Mark; Ji, Ning; Zhu, Long  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, USA  
 SOURCE: PCT Int. Appl., 37 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

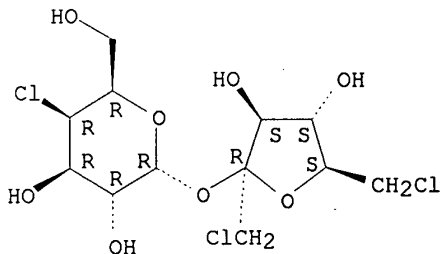
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002091848	A1	20021121	WO 2002-US15267	20020514
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003049303	A1	20030313	US 2002-146247	20020515
PRIORITY APPLN. INFO.: US 2001-291177P P 20010515				
AB A confectionery compn. comprises: (i) an effective amt. of a natural plant ext. selected from tea, gold thread, honeysuckle, magnolia exts. and mixts. thereof; (ii) an oral care active selected from the group consisting of anti-calculus agents; anti-plaque agents; fluoride ion source; desensitizing agents; oral malodor control agents; H2 antagonists; and mixts. thereof; (iii) less than about 10% water; and (iv) a suitable confectionery carrier material. The present invention relates to stable portable oral care confectionery compns. which provide enhanced oral malodor benefits in combination with one or more further oral care benefits. Thus, a hardboiled candy comprises sugar 56.99, glucose 38.0, water 3.0, gold thread ext. 0.5, sodium polyphosphate 5.0, and flavor 1.0%.				
IC ICM A23G003-00				

ICS A61K007-26  
 CC 17-6 (Food and Feed Chemistry)  
 IT Confectionery  
 Flavoring materials  
**Solvent extraction**  
 (anticariogenic confectionery compns. providing enhanced oral care benefits)  
 IT 56-81-5, Glycerol, uses 57-55-6, Propylene glycol, uses 60-29-7,  
 Diethyl ether, uses 67-64-1, Acetone, uses **141-78-6**,  
**Ethyl acetate**, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (anticariogenic confectionery compns. providing enhanced oral care benefits)  
 IT 50-70-4, Sorbitol, biological studies 69-65-8, Mannitol 585-88-6,  
 Maltitol 22839-47-0, Aspartame **56038-13-2**, **Sucralose**  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (noncariogenic sweetener; anticariogenic confectionery compns. providing enhanced oral care benefits)  
 IT **141-78-6**, **Ethyl acetate**, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (anticariogenic confectionery compns. providing enhanced oral care benefits)  
 RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac

IT **56038-13-2**, **Sucralose**  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (noncariogenic sweetener; anticariogenic confectionery compns. providing enhanced oral care benefits)  
 RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:854830 HCAPLUS  
 DOCUMENT NUMBER: 138:38243

TITLE: Determination of **sucralose** in foods by HPLC using pre-column derivatization

AUTHOR(S): Nojiri, Shuko; Nakazato, Mitsuo; Kasuya, Yoko; Takano, Ichiro; Oishi, Mitsuo; Yasuda, Kazuo; Suzuki, Sukeji

CORPORATE SOURCE: Tama Branch Lab., Tokyo Metrop. Res. Lab. Public Health, Tachikawa, 190-0023, Japan

SOURCE: Shokuhin Eiseigaku Zasshi (2002), 43(5), 289-294  
CODEN: SKEZAP; ISSN: 0015-6426

PUBLISHER: Nippon Shokuhin Eisei Gakkai

DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB The development of a sensitive pre-column derivatization high-performance liq. chromatog. (HPLC) method for detn. of **sucralose** is reported. **Sucralose** is converted into a strongly UV (UV)-absorbing deriv., possessing strong absorption at 260 nm, by treatment with p-nitrobenzoyl chloride (PNBCL). Homogenized samples were dialyzed and washed with a Bond Elut ENV cartridge, then the eluate was evapd. to dryness and the residue was derivatized. Subsequently, the **sucralose** deriv. was purified with hexane-Et acetate (9:1) in a silica cartridge, and then the **sucralose** deriv. was eluted with acetone. HPLC was performed on a Ph column, using acetonitrile-water (73:27) as a mobile phase with UV detection (260 nm). The calibration curve was linear in the range of 1 .mu.g/mL to 50 .mu.g/mL of **sucralose**. The recoveries of **sucralose** from eight kinds of foods spiked at the levels of 0.20 and 0.05 g/kg of **sucralose** were more than 76.2% with SD values in the range from 0.90% to 4.31%. The quant. limit of the developed method was 0.005 g/kg for **sucralose** in samples.

CC 17-1 (Food and Feed Chemistry)

ST **sucralose** detn nitrobenzoylation precolumn derivatization HPLC food; liq chromatog **sucralose** detn food nitrobenzoyl chloride derivatization

IT Beverages  
(carbonated; detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT Beverages  
Food additives  
Food analysis  
HPLC  
Sweetening agents  
(detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT Milk preparations  
(lactic acid drinks; detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT Confectionery  
(ramune; detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT Milk preparations  
(yogurt; detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT 478809-14-2  
RL: ANT (Analyte); ANST (Analytical study)  
(detn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT 56038-13-2, **Sucralose**  
RL: ANT (Analyte); BSU (Biological study, unclassified); RCT (Reactant);



ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent)

(detrn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT 122-04-3, p-Nitrobenzoyl chloride

RL: ARG (Analytical reagent use); RCT (Reactant); ANST (Analytical study); RACT (Reactant or reagent); USES (Uses)

(detrn. of **sucralose** in foods by HPLC using pre-column derivatization)

IT 56038-13-2, **Sucralose**

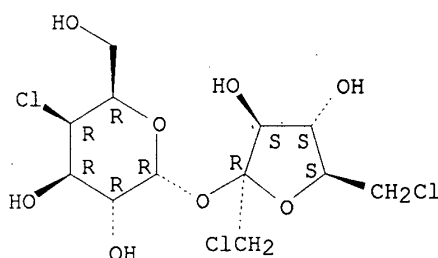
RL: ANT (Analyte); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); RACT (Reactant or reagent)

(detrn. of **sucralose** in foods by HPLC using pre-column derivatization)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:542160 HCAPLUS

DOCUMENT NUMBER: 133:149760

TITLE: Food compositions and taste improvers containing bagasse extracts, and taste improvement with them

INVENTOR(S): Kojima, Hirotooshi; Sugitani, Toshiaki

PATENT ASSIGNEE(S): Mitsui Sugar Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

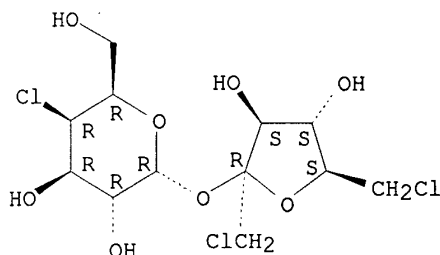
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000217540	A2	20000808	JP 1999-24458	19990201
PRIORITY APPLN. INFO.:			JP 1999-24458	19990201

AB The food compns. and taste improvers contain exts. of sugarcane bagasse with H2O and/or hydrophilic solvents. The bagasse exts. mask the unpleasant taste of sweetening agents such as stevia, saccharin, aspartame, and sugar alcs.

IC ICM A23L001-221

ICS A23L001-236; A23B007-10; A23L002-00; A23L002-02; C12J001-00  
 CC 17-6 (Food and Feed Chemistry)  
 Section cross-reference(s): 11  
 IT 50-70-4, Sorbitol, biological studies 69-65-8, Mannitol 81-07-2,  
 Saccharin 87-99-0, Xylitol 128-44-9, Saccharin sodium 149-32-6,  
 Erythritol 585-86-4, Lactitol 585-88-6, Maltitol 20702-77-6,  
 Neohesperidin dihydrochalcone 22839-47-0, Palsweet Diet  
**56038-13-2, Sucralose** 64519-82-0, Palatinit  
 80863-62-3, Alitame 287487-21-2, Rebaudio A 9  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (bagasse exts. for masking of unpleasant taste)  
 IT 64-17-5, Ethanol, biological studies 7732-18-5, Water, biological  
 studies  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (extn. solvent; bagasse exts. for masking  
 of unpleasant taste)  
 IT **56038-13-2, Sucralose**  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (bagasse exts. for masking of unpleasant taste)  
 RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-  
 fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

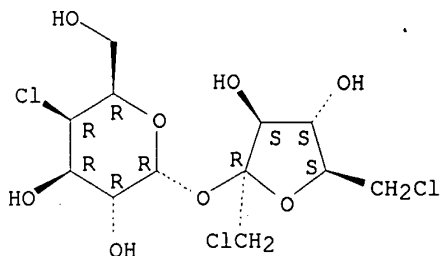


L26 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:161084 HCAPLUS  
 DOCUMENT NUMBER: 132:193511  
 TITLE: Extraction, fractionation, and application of novel  
 inulin fractions for use in food  
 INVENTOR(S): Silver, Barnard Stewart  
 PATENT ASSIGNEE(S): USA  
 SOURCE: PCT Int. Appl., 30 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000011967	A1	20000309	WO 1999-US19422	19990825
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,				

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 MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,  
 SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG,  
 KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
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 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 CA 2341536 AA 20000309 CA 1999-2341536 19990825  
 AU 9955853 A1 20000321 AU 1999-55853 19990825  
 BR 9913658 A 20010605 BR 1999-13658 19990825  
 EP 1107671 A1 20010620 EP 1999-942487 19990825  
 EP 1107671 B1 20030423  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO  
 JP 2002523564 T2 20020730 JP 2000-567098 19990825  
 NZ 510269 A 20030328 NZ 1999-510269 19990825  
 ZA 2001001586 A 20020527 ZA 2001-1586 20010226  
 PRIORITY APPLN. INFO.: US 1998-98195P P 19980827  
 US 1998-104091P P 19981013  
 WO 1999-US19422 W 19990825  
 AB Novel inulin fractions with reduced hygroscopicity and improved water  
 soly. and(or) water miscibility at ambient temps. comprise at least two  
 different polysaccharides each having different mol. wts. in the range  
 from about 340 to about 2288. The inulin fraction contains less than  
 about 0.75% by wt. of monosaccharides and less than about 25% by wt. of  
 polysaccharides with mol. wts. above 2288. Thus, chicory root exts. after  
 pasteurization may be fractionated by using centrifugal separators,  
 decantation, and nanofiltration.  
 IC ICM A23L001-236  
 CC 17-6 (Food and Feed Chemistry)  
 IT **Extraction**  
 Fractionation  
 (of novel inulin fractions for use in food)  
 IT 50-70-4, D-Glucitol, biological studies 69-65-8, Mannitol 81-07-2,  
 Saccharin 87-99-0, Xylitol 585-88-6, Maltitol 22839-47-0, Aspartame  
**56038-13-2, Sucralose**  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (extn., fractionation, and application of novel inulin fractions for  
 use in food)  
 IT **56038-13-2, Sucralose**  
 RL: FFD (Food or feed use); BIOL (Biological study); USES (Uses)  
 (extn., fractionation, and application of novel inulin fractions for  
 use in food)  
 RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-  
 fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L26 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:597422 HCAPLUS

DOCUMENT NUMBER: 131:198845

TITLE: Taste agent from Saccharum officinarum, process for preparing it, products containing it

INVENTOR(S): Ramirez, Carlos; Javes, Michael F.; Kiwala, Jacob; Grainger, Brian; Hawn, Regina D.; Kleinhenz, Robert; Rossy, Phillip A.; Davidson, Richard H.; Bolen, Paul L.; Warder, Ira T.; Pittet, Alan Owen; Miller, Kevin P.; Schulman, Marvin; Muralidhara, Ranya; Kinlin, William J.

PATENT ASSIGNEE(S): International Flavors + Fragrances Inc., USA

SOURCE: Eur. Pat. Appl., 111 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 941671	A2	19990915	EP 1999-301867	19990311
EP 941671	A3	20010801		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6245376	B1	20010612	US 1999-441366	19991117
PRIORITY APPLN. INFO.:				
			US 1998-38945	A 19980312
			US 1998-208463	A 19981210
			US 1999-231020	A 19990114
			US 1999-305484	A3 19990506

OTHER SOURCE(S): MARPAT 131:198845

AB Described is a process for producing one or more flavorants including food, chewing gum, beverage (e.g., coffee, milk, cocoa and citrus/whey protein), oral care compn. (e.g., toothpaste and mouthwash) and tobacco additives from Saccharum officinarum leaves (sugarcane leaves) by means of carrying out one or more phys. sepn. unit operations on such leaves, macerates thereof or mixts. of leaves and macerates thereof whereby one or more natural food, chewing gum, beverage, oral care compn. or tobacco additives is sepd. and isolated from the remainder of the leaves, macerates thereof or mixts. of leaves and macerates thereof. Such unit operations include pressurization using hydraulic press means, steam distn., fractional distn., supercrit. carbon dioxide extn.,

volatile solvent extn. and/or charcoal column sepn. means. Also described is app. for carrying out such processes as well as the products produced using such processes and organoleptic uses of such products. Also described are compns. comprising (a) such flavorants in admixt. with (b) an eatable having a bitter and/or metallic taste. The eatable is any ingested material taken by mammals, such as foodstuffs, beverages, chewing gums, non-calorie food components or medicines including bitter chocolate or a drug such as ibuprofen. Also described are processes for augmenting, enhancing or imparting flavors in or to foodstuffs, chewing gums and beverages by adding thereto the aforementioned flavorant taken alone or combined with a solid water-sol. carrier (as prepd. using spray drying or freeze drying process steps) and other additives, including nutritional supplements such as calcium glycerophosphate. Also described are smoking tobacco compns. and articles comprising smoking tobacco and intimately admixed therewith an aroma or taste augmenting, enhancing or imparting quantity and concn. of one or more flavorants (tobacco additive or tobacco article adjunct) (produced from *S. officinarum* leaves) by means of carrying out the above-mentioned process.

- IC ICM A23L001-221
- ICS A23L002-56; A23G003-30; A23G001-00; A24B015-30; A61K007-16
- CC 17-6 (Food and Feed Chemistry)
- Section cross-reference(s): 48, 62
- IT Beverages
- Chewing gum
- Cosmetics
- Dentifrices
- Drugs
- Essences
- Extraction apparatus
- Flavor
- Flavoring materials
- Food additives
- Freeze drying
- Grapefruit juice
- Health products
- Milk preparations
- Mouthwashes
- Orange juice
- Pervaporation
- Pressure
- Puddings
- Solvent extraction**
- Soups
- Sweetening agents
- Temperature effects, biological
- Tobacco products
- Tomato juice
- (flavoring agent from *Saccharum officinarum*, process for prepg. it and products contg. it)
- IT **Extraction**
- (supercrit.; flavoring agent from *Saccharum officinarum*, process for prepg. it and products contg. it)
- IT 81-07-2, Saccharin 811-97-2, 1,1,1,2-Tetrafluoroethane 22839-47-0, Aspartame 22839-47-0D, Aspartame, alkyl esters 27214-00-2, Calcium glycerophosphate 56038-13-2, Sucralose
- RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL

(Biological study); USES (Uses)

(flavoring agent from *Saccharum officinarum*, process for prepg. it and products contg. it)IT **56038-13-2, Sucralose**

RL: BUU (Biological use, unclassified); FFD (Food or feed use); BIOL

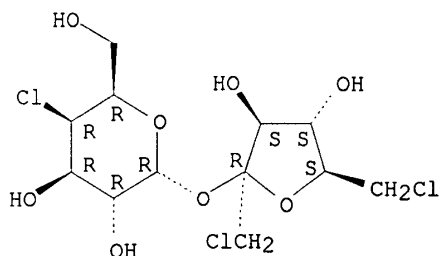
(Biological study); USES (Uses)

(flavoring agent from *Saccharum officinarum*, process for prepg. it and products contg. it)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 .ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:229103 HCAPLUS

DOCUMENT NUMBER: 124:343978

TITLE: Production of **sucralose** without intermediate isolation of crystalline **sucralose-6-ester**

INVENTOR(S): Navia, Juan L.; Walkup, Robert E.; Vernon, Nicholas M.; Neiditch, David S.

PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA

SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 323,954, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5498709	A	19960312	US 1995-448710	19950524
AU 9534201	A1	19960502	AU 1995-34201	19951011
AU 707557	B2	19990715		
IL 115562	A1	20001121	IL 1995-115562	19951011
CA 2160641	AA	19960418	CA 1995-2160641	19951016
FI 9504908	A	19960418	FI 1995-4908	19951016
NO 9504111	A	19960418	NO 1995-4111	19951016
EP 708110	A2	19960424	EP 1995-307329	19951016
EP 708110	A3	19960807		
EP 708110	B1	20010314		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

JP 08208679 A2 19960813 JP 1995-291620 19951016

ZA 9508724	A	19970416	ZA 1995-8724	19951016
BR 9504423	A	19970527	BR 1995-4423	19951016
RU 2155769	C2	20000910	RU 1995-118102	19951016
AT 199723	E	20010315	AT 1995-307329	19951016
ES 2157304	T3	20010816	ES 1995-307329	19951016
PRIORITY APPLN. INFO.:			US 1994-323954	B2 19941017
			US 1995-448710	A 19950524

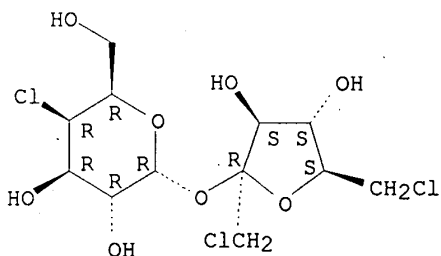
OTHER SOURCE(S): CASREACT 124:343978

AB A process is claimed for producing **sucralose** from a feed mixt. of (a) 6-O-acyl-4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose, (b) salt including alkali metal or alk. earth metal chloride, (c) water, and (d) other chlorinated sucrose byproducts, in a reaction medium comprising a tertiary amide, wherein said process comprises: (i) deacylating the 6-O-acyl-4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose by raising the pH of the aq. soln. of (a), (b), (c) and (d) to about 11 (.+- .1) at a temp. and for a period of time sufficient to effect said deacylation, to produce an aq. soln. comprising **sucralose**, salt including alkali metal or alk. earth metal chloride, and other chlorinated sucrose byproducts, in a reaction medium comprising a tertiary amide; (ii) removing said tertiary amide; and (iii) recovering **sucralose** from the product of step (ii). A soln. of crude sucrose-6-acetate in DMF (1.447 Kg) contg. 416.94 g (1.084 mol) sucrose-6-acetate was dild. with 2.51 kg fresh DMF, cooled to -2.degree., and stirred vigorously while phosgene (1.125 Kg, 99%, 11.26 mol) was added at a rate of 5.4 to 6.7 g/min. The reaction mixt. was allowed to stir at ambient temp. for 30 min, then heated to 115.degree. over a 2-3 h period, then held at 115.degree. .+- .1.degree. for 1.75 h, then cooled to 35.degree. over 30 min; the final mass, 4.34 kg, was carried on to the dual stream caustic quench with NaOH/DMF/water, affording approx. 9 kg of quenched mixt. contg. 2 wt. % 4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose-6-acetate (TGS-6-Ac). DMF and tarry, polymeric impurities were removed by steam stripping; for every 9 kg batch of feed, approx. 13 kg of steam-stripped bottoms were produced with a TGS-6-Ac concn. of about 1.5%-wt.; quenched feed contg. 1.8% TGS-6-Ac, 8.5% salts, 54.6% water, and 30.4% DMF, was stripped to produce bottoms contg. 1.6% TGS-6-Ac, 9.8% salts, 84.9% water, and 0.1% DMF residual (99.6% removal of DMF). The crude brine soln. of TGS-6-Ac (15.4 kg) was subjected to deacetylation by raising the pH of the soln. to 11.5 with 50% wt./wt. NaOH; after deacetylation, the soln. was neutralized with concd. HCl. **Sucralose** was isolated by counter-current extn. with **Et acetate** and crystn. from **Et acetate** (providing 33.5 g **sucralose**) or water (20.2 g **sucralose**).

IC ICM C07G017-00  
ICS C07H001-00; C07H003-00  
NCL 536124000  
CC 33-2 (Carbohydrates)  
Section cross-reference(s): 45  
ST **sucralose** prepn; sucrose acetate chlorination; deacetylation  
**sucralose** acetate  
IT 75-44-5, Phosgene 3724-43-4, Arnold's reagent  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(chlorination agent; prodn. of **sucralose** without intermediate isolation of cryst. **sucralose**-6-ester)  
IT 68-12-2, DMF, uses  
RL: NUU (Other use, unclassified); REM (Removal or disposal); PROC (Process); USES (Uses)  
(chlorination solvent, removal by steam stripping; prodn. of

- sucralose without intermediate isolation of cryst.  
sucralose-6-ester)
- IT 56038-13-2P, **Sucralose**  
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)  
(prodn. of **sucralose** without intermediate isolation of cryst.  
sucralose-6-ester)
- IT 105066-21-5P, **Sucralose** 6-acetate 127924-17-8P,  
**Sucralose** 6-benzoate  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prodn. of **sucralose** without intermediate isolation of cryst.  
sucralose-6-ester)
- IT 63648-81-7, Sucrose 6-acetate 127924-16-7, Sucrose 6-benzoate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prodn. of **sucralose** without intermediate isolation of cryst.  
sucralose-6-ester)
- IT 141-78-6, **Ethyl acetate**, uses 7732-18-5,  
Water, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; prodn. of **sucralose** without intermediate isolation  
of cryst. **sucralose**-6-ester)
- IT 56038-13-2P, **Sucralose**  
RL: IMF (Industrial manufacture); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)  
(prodn. of **sucralose** without intermediate isolation of cryst.  
sucralose-6-ester)
- RN 56038-13-2 HCAPLUS  
CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- IT 141-78-6, **Ethyl acetate**, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; prodn. of **sucralose** without intermediate isolation  
of cryst. **sucralose**-6-ester)
- RN 141-78-6 HCAPLUS  
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac



L26 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1991:583592 HCAPLUS  
 DOCUMENT NUMBER: 115:183592  
 TITLE: Extraction of 1,3-diacyloxy-1,1,3,3-tetrahydrocarbyldistannoxanes from mixtures with sucrose 6-esters  
 INVENTOR(S): Vernon, Nicholas M.; Walkup, Robert E.  
 PATENT ASSIGNEE(S): Noramco, Inc., USA  
 SOURCE: U.S., 12 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5034551	A	19910723	US 1990-512690	19900423
IL 97891	A1	19950731	IL 1991-97891	19910417
AU 9175377	A1	19911024	AU 1991-75377	19910419
AU 631062	B2	19921112		
JP 07097387	A2	19950411	JP 1991-113708	19910419
JP 2882548	B2	19990412		
CA 2040933	AA	19911024	CA 1991-2040933	19910422
CA 2040933	C	20020129		
FI 9101941	A	19911024	FI 1991-1941	19910422
FI 97886	B	19961129		
FI 97886	C	19970310		
NO 9101590	A	19911024	NO 1991-1590	19910422
NO 180009	B	19961021		
NO 180009	C	19970129		
EP 455390	A2	19911106	EP 1991-303565	19910422
EP 455390	A3	19920722		
EP 455390	B1	19950920		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
ZA 9102995	A	19921230	ZA 1991-2995	19910422
RU 2036197	C1	19950527	RU 1991-4895127	19910422
ES 2080895	T3	19960216	ES 1991-303565	19910422

PRIORITY APPLN. INFO.: US 1990-512690 A 19900423

AB 1,3-Diacyloxy-1,1,3,3-tetra(hydrocarbyl)distannoxanes were sepd. from their mixts. with sucrose 6-esters and polar aprotic solvents by addn. of a small amt. of H<sub>2</sub>O and extn. using a H<sub>2</sub>O-immiscible org. solvent. Thus, 1,3-di(6-O-sucrose)-1,1,3,3-tetrabutylldistannoxane (prepn. given) in DMF was stirred overnight with (PhCO)<sub>2</sub>O; the mixt. was agitated with cyclohexane and H<sub>2</sub>O and the cyclohexane phase was concd. to give 1,1,3,3-tetrabutyl-1,3-dibenzoyloxydistannoxane while concn. of the DMF phase gave crude sucrose-6-benzoate contg. 0.9% wt./wt. Sn.

IC C07H007-22

NCL 556089000

CC 29-8 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 17, 33

IT **Extraction**  
 (of diacyloxytetrahydrocarbyldistannoxanes from mixts. with sucrose esters, nonpolar solvents for)

IT 105066-21-5P, **Sucralose** 6-acetate 127924-17-8P,  
**Sucralose**-6-benzoate  
 RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and conversion of, to **sucralose**)

IT **56038-13-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

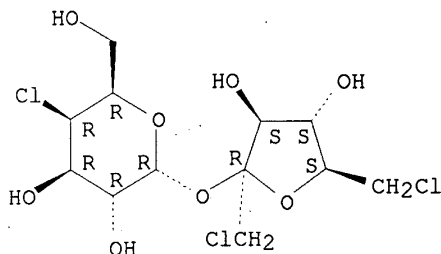
IT 98-82-8, Cumene 110-54-3, Hexane, uses and miscellaneous 110-82-7,  
 Cyclohexane, uses and miscellaneous 142-82-5, Heptane, uses and  
 miscellaneous 1634-04-4, Methyl tert-butyl ether  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (solvent, for **extn.** of  
 diacyloxytetrahydrocarbyldistannoxanes from mixts. with sucrose esters)

IT **56038-13-2P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-  
 fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L26 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1991:22692 HCAPLUS

DOCUMENT NUMBER: 114:22692

TITLE: Heat-stabilization of **sucralose** as a complex  
 with cyclodextrins

INVENTOR(S): Cherukuri, Subraman Rao; Wong, Lucy Lee

PATENT ASSIGNEE(S): Warner-Lambert Co., USA

SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 375122	A2	19900627	EP 1989-310553	19891013
EP 375122	A3	19901219		
EP 375122	B1	19940727		
R: BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE				
US 4971797	A	19901120	US 1988-288512	19881222
NO 8905083	A	19900625	NO 1989-5083	19891218
AU 8947002	A1	19900628	AU 1989-47002	19891219
AU 617269	B2	19911121		
CA 2006304	AA	19900622	CA 1989-2006304	19891221

DK 8906561	A	19900623	DK 1989-6561	19891221
JP 02258714	A2	19901019	JP 1989-329813	19891221
JP 2977216	B2	19991115		
ZA 8909859	A	19901031	ZA 1989-9859	19891221
PRIORITY APPLN. INFO.:			US 1988-288512	19881222

AB **Sucralose** is stabilized against browning for times used in food prepn. by complexing it with cyclodextrins. Complexes of **sucralose** and 5-20% cyclodextrin were prepd. by mixing them in MeOH and drying under vacuum. Dried samples were then heated at 95.degree. and the time taken to turn light brown detd. **Sucralose** alone colored after 60 min. A complex contg. 5% cyclodextrin colored after 80 min. and one contg. 20% cyclodextrin was stable for 180 min. Chewing gums prepd. with a 5% cyclodextrin-**sucralose** complex showed a stronger initial sweetness than those contg. free **sucralose** or a niacin-stabilized **sucralose**.

IC ICM A23L001-236

CC 17-6 (Food and Feed Chemistry)

ST **sucralose** complex cyclodextrin heat stable

IT Sweetening agents  
(heat-stable, **sucralose** complexes with cyclodextrins as)

IT Heat, chemical and physical effects  
(**sucralose** degrading by, stabilization against, complexes with cyclodextrins for)

IT Beverages  
Chewing gum  
Chocolate  
Confectionery  
Food  
Mouthwashes  
(sweetener for, heat-stable **sucralose** complex with cyclodextrins as)

IT Bakery products  
(biscuits, sweetener for, heat-stable **sucralose** complex with cyclodextrins as)

IT Dentifrices  
(breath-freshening, sugar substitute for, heat-stable **sucralose** complex with cyclodextrins as)

IT Confectionery  
(candy, hard, sweetener for, heat-stable **sucralose** complex with cyclodextrins as)

IT Confectionery  
(candy, soft, sweetener for, heat-stable **sucralose** complex with cyclodextrins as)

IT Pharmaceutical dosage forms  
(lozenges, sweetener for, heat-stable **sucralose** complex with cyclodextrins as)

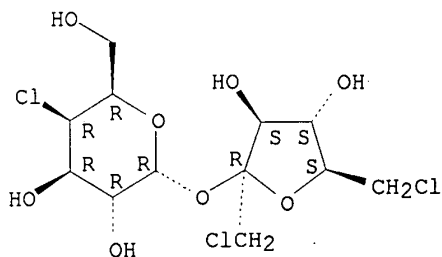
IT Pharmaceutical dosage forms  
(oral, sugar substitute for, heat-stable **sucralose** complex with cyclodextrins as)

IT 12619-70-4D, Cyclodextrin, complexes with **sucralose**  
56038-13-2D, **Sucralose**, complexes with cyclodextrins  
RL: BIOL (Biological study)  
(heat-stable, for use as sugar substitute in food prepn.)

IT 67-56-1, Methanol, biological studies 141-78-6, Ethyl acetate, biological studies 63983-35-7  
RL: BIOL (Biological study)  
(solvent in prepn. heat-stable **sucralose** complexes with

cyclodextrins)  
 IT 56038-13-2D, **Sucralose**, complexes with cyclodextrins  
 RL: BIOL (Biological study)  
 (heat-stable, for use as sugar substitute in food prepn.)  
 RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 141-78-6, **Ethyl acetate**, biological studies  
 RL: BIOL (Biological study)  
 (solvent in prepn. heat-stable **sucralose** complexes with cyclodextrins)  
 RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac

L26 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1988:508922 HCAPLUS  
 DOCUMENT NUMBER: 109:108922  
 TITLE: A tetrachlororaffinose and its enzymic hydrolysis in manufacture of **sucralose**  
 INVENTOR(S): Rathbone, Elner Brean; Mufti, Khizar Sultan; Khan, Riaz Ahmed; Cheetham, Peter Samuel James; Hacking, Andrew John; Dordick, Jonathan Seth  
 PATENT ASSIGNEE(S): Tate and Lyle PLC, UK  
 SOURCE: Brit. UK Pat. Appl., 8 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2181734	A1	19870429	GB 1986-25056	19861020
GB 2181734	B2	19890920		
FI 8604244	A	19870422	FI 1986-4244	19861020
FI 82836	B	19910115		
FI 82836	C	19910425		

DK 8605029	A	19870422	DK 1986-5029	19861020
DK 164869	B	19920831		
DK 164869	C	19930111		
NO 8604171	A	19870422	NO 1986-4171	19861020
NO 168373	B	19911104		
NO 168373	C	19920212		
AU 8664211	A1	19870430	AU 1986-64211	19861020
AU 589224	B2	19891005		
EP 221717	A2	19870513	EP 1986-308128	19861020
EP 221717	A3	19881130		
EP 221717	B1	19920212		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ZA 8607918	A	19870624	ZA 1986-7918	19861020
JP 62181288	A2	19870808	JP 1986-249397	19861020
JP 06044874	B4	19940615		
US 4826962	A	19890502	US 1986-921370	19861020
IL 80365	A1	19900917	IL 1986-80365	19861020
SU 1635905	A3	19910315	SU 1986-4028456	19861020
CA 1282728	A1	19910409	CA 1986-520919	19861020
AT 72566	E	19920215	AT 1986-308128	19861020
ES 2033236	T3	19930316	ES 1986-308128	19861020
JP 06293787	A2	19941021	JP 1993-301909	19931201
JP 07035391	B4	19950419		

## PRIORITY APPLN. INFO.:

GB 1985-25871 19851021  
EP 1986-308128 19861020

- AB O-.alpha.-D-6-Chloro-6-deoxygalactopyranosyl-(1.fwdarw.6)-.alpha.-D-4-chloro-4-deoxygalactopyranosyl-(1.fwdarw.2)-.beta.-D-1,6-dichloro-1,6-dideoxyfructofuranoside (TCR) is used to prep. **sucralose** by incubation with an enzyme from *Mortierella vinacea*, *Circinella muscae*, or *Aspergillus niger* to remove the 6-chloro-6-deoxygalactosyl moiety from the 6-position. TCR was prepd. by treating raffinose with thionyl chloride in the presence of triphenylphosphine oxide and triphenylphosphine. **Sucralose** was obtained by incubating TCR with melibiase in the form of pelletized cells of *M. vinacea* raffinoseutilizer at 55.degree. for .ltoreq.100 h. The degree of hydrolysis was followed by TLC anal. About 70% of the TCR had been hydrolyzed after 90 h. The product was sepd. by chromatog.
- IC ICM C07D407-14  
ICS C07D407-12; C07D307-20; C07D309-10
- CC 16-9 (Fermentation and Bioindustrial Chemistry)  
Section cross-reference(s): 33
- ST tetrachlorogalactoraffinose enzymic hydrolysis **sucralose** manuf;  
raffinose tetrachlorogalacto **sucralose** enzymic manuf;  
*Aspergillus* **sucralose** manuf tetrachlorogalactoraffinose;  
*Mortierella* **sucralose** manuf tetrachlorogalactoraffinose;  
*Circinella* **sucralose** manuf tetrachlorogalactoraffinose
- IT Solvents  
(org. water-miscible, in **sucralose** manuf. with microorganism enzyme)
- IT *Aspergillus niger*  
*Circinella muscae*  
*Mortierella vinacea*  
*Mortierella vinacea* raffinoseutilizer  
(**sucralose** manuf. from tetrachlorogalactoraffinose by enzymic hydrolysis with)
- IT 71-36-3, n-Butanol, biological studies 108-10-1, Methyl isobutyl ketone  
141-78-6, **Ethyl acetate**, biological studies

RL: BIOL (Biological study)  
 (in **sucralose** manuf. with enzyme-contg. microorganism)

IT **56038-13-2P, Sucralose**  
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP  
 (Preparation)  
 (manuf. of, from tetrachlorogalactoraffinose, by enzymic hydrolysis  
 with Mortierella or other microorganism)

IT 9025-35-8P, Melibiase  
 RL: PREP (Preparation)  
 (of Mortierella vinacea raffinoseutilizer, **sucralose** manuf.  
 from tetrachlorogalactoraffinose with)

IT 116173-32-1P  
 RL: PREP (Preparation)  
 (prepn. of, for manuf. of **sucralose** by enzymic hydrolysis  
 with Mortierella or other microorganism)

IT **141-78-6, Ethyl acetate**, biological studies  
 RL: BIOL (Biological study)  
 (in **sucralose** manuf. with enzyme-contg. microorganism)

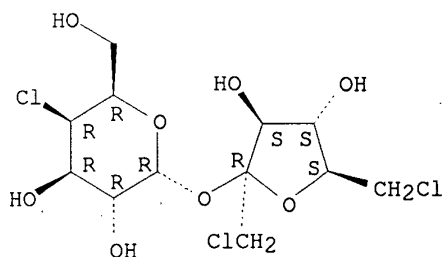
RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac

IT **56038-13-2P, Sucralose**  
 RL: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP  
 (Preparation)  
 (manuf. of, from tetrachlorogalactoraffinose, by enzymic hydrolysis  
 with Mortierella or other microorganism)

RN 56038-13-2 HCAPLUS  
 CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-  
 fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

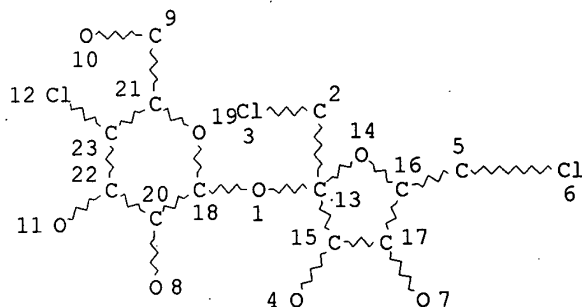
Absolute stereochemistry.



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L2

STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 23

## STEREO ATTRIBUTES: NONE

L3 15 SEA FILE=REGISTRY FAM FUL L2

L27 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L3(L) PUR/RL

=&gt; d ibib abs hitstr 1-3

L27 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:391728 HCAPLUS

DOCUMENT NUMBER: 136:369947

TITLE: Improved sucralose composition and process for its preparation

INVENTOR(S): El Kabbani, Fiesal; Catani, Steven J.; Heiss, Christian; Navia, Juan; Brohmi, Amal

PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002040495	A2	20020523	WO 2001-US43491	20011116
WO 2002040495	A3	20030501		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002026918 A5 20020527 AU 2002-26918 20011116  
 US 2002120134 A1 20020829 US 2001-991123 20011116

PRIORITY APPLN. INFO.: US 2000-249782P P 20001117  
 WO 2001-US43491 W 20011116

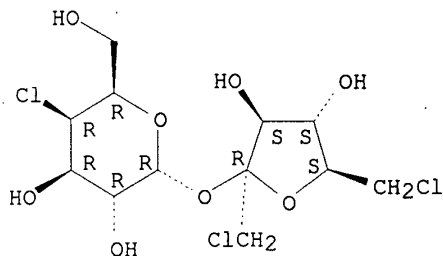
AB A process for the crystn. of sucralose from an aq. soln. comprising  
 controlling the pH of said aq. soln. so as to maintain the pH in the range  
 of from about 5.5 to about 8.5 during the formation of sucralose crystals.

IT 56038-13-2P, Sucralose  
 RL: IMF (Industrial manufacture); PUR (Purification or recovery)  
 ; PREP (Preparation)  
 (improved sucralose compn. and crystn. process for its prepn.)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-  
 fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:229103 HCAPLUS

DOCUMENT NUMBER: 124:343978

TITLE: Production of sucralose without intermediate isolation  
 of crystalline sucralose-6-ester

INVENTOR(S): Navia, Juan L.; Walkup, Robert E.; Vernon, Nicholas  
 M.; Neiditch, David S.

PATENT ASSIGNEE(S): McNeil-PPC, Inc., USA

SOURCE: U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 323,954,  
 abandoned.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5498709	A	19960312	US 1995-448710	19950524
AU 9534201	A1	19960502	AU 1995-34201	19951011
AU 707557	B2	19990715		
IL 115562	A1	20001121	IL 1995-115562	19951011
CA 2160641	AA	19960418	CA 1995-2160641	19951016
FI 9504908	A	19960418	FI 1995-4908	19951016



NO 9504111	A	19960418	NO 1995-4111	19951016
EP 708110	A2	19960424	EP 1995-307329	19951016
EP 708110	A3	19960807		
EP 708110	B1	20010314		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

JP 08208679	A2	19960813	JP 1995-291620	19951016
ZA 9508724	A	19970416	ZA 1995-8724	19951016
BR 9504423	A	19970527	BR 1995-4423	19951016
RU 2155769	C2	20000910	RU 1995-118102	19951016
AT 199723	E	20010315	AT 1995-307329	19951016
ES 2157304	T3	20010816	ES 1995-307329	19951016

PRIORITY APPLN. INFO.:

US 1994-323954 B2 19941017

US 1995-448710 A 19950524

OTHER SOURCE(S): CASREACT 124:343978

AB A process is claimed for producing sucralose from a feed mixt. of (a) 6-O-acyl-4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose, (b) salt including alkali metal or alk. earth metal chloride, (c) water, and (d) other chlorinated sucrose byproducts, in a reaction medium comprising a tertiary amide, wherein said process comprises: (i) deacylating the 6-O-acyl-4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose by raising the pH of the aq. soln. of (a), (b), (c) and (d) to about 11 (±.1) at a temp. and for a period of time sufficient to effect said deacylation, to produce an aq. soln. comprising sucralose, salt including alkali metal or alk. earth metal chloride, and other chlorinated sucrose byproducts, in a reaction medium comprising a tertiary amide; (ii) removing said tertiary amide; and (iii) recovering sucralose from the product of step (ii). A soln. of crude sucrose-6-acetate in DMF (1.447 Kg) contg. 416.94 g (1.084 mol) sucrose-6-acetate was dild. with 2.51 kg fresh DMF, cooled to -2.degree., and stirred vigorously while phosgene (1.125 Kg, 99%, 11.26 mol) was added at a rate of 5.4 to 6.7 g/min. The reaction mixt. was allowed to stir at ambient temp. for 30 min, then heated to 115.degree. over a 2-3 h period, then held at 115.degree. ±. 1.degree. for 1.75 h, then cooled to 35.degree. over 30 min; the final mass, 4.34 kg, was carried on to the dual stream caustic quench with NaOH/DMF/water, affording approx. 9 kg of quenched mixt. contg. 2 wt. % 4,1',6'-trichloro-4,1',6'-trideoxygalactosucrose-6-acetate (TGS-6-Ac). DMF and tarry, polymeric impurities were removed by steam stripping; for every 9 kg batch of feed, approx. 13 kg of steam-stripped bottoms were produced with a TGS-6-Ac concn. of about 1.5%-wt.; quenched feed contg. 1.8% TGS-6-Ac, 8.5% salts, 54.6% water, and 30.4% DMF, was stripped to produce bottoms contg. 1.6% TGS-6-Ac, 9.8% salts, 84.9% water, and 0.1% DMF residual (99.6% removal of DMF). The crude brine soln. of TGS-6-Ac (15.4 kg) was subjected to deacetylation by raising the pH of the soln. to 11.5 with 50% wt./wt. NaOH; after deacetylation, the soln. was neutralized with concd. HCl. Sucralose was isolated by counter-current extn. with Et acetate and crystn. from Et acetate (providing 33.5 g sucralose) or water (20.2 g sucralose).

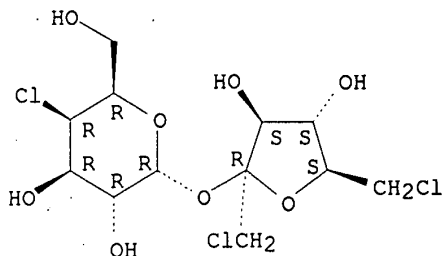
IT 56038-13-2P, Sucralose

RL: IMF (Industrial manufacture); PUR (Purification or recovery)  
; SPN (Synthetic preparation); PREP (Preparation)  
(prodn. of sucralose without intermediate isolation of cryst.  
sucralose-6-ester)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L27 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1979:104227 HCAPLUS

DOCUMENT NUMBER: 90:104227

TITLE: Semipreparative high-pressure liquid chromatography of synthetic carbohydrates

AUTHOR(S): Wingard, Robert E., Jr.; Ng, Steve; Dale, James A.; Wang, Patricia C.

CORPORATE SOURCE: Chem. Synth. Lab., Dynapol, Palo Alto, CA, USA

SOURCE: Journal of Liquid Chromatography (1978), 1(6), 775-82

CODEN: JLCHD8; ISSN: 0148-3919

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A rapid and effective method utilizing a 30 cm .times. 7.8 mm i.d. column packed with Waters Assocs. carbohydrate anal. packing in conjunction with isocratic water-acetonitrile elution and refractive index detection was developed for the purifn. of hundred-mg quantities of water-sol. synthetic carbohydrates. The generality of this method is illustrated by its application to 13 sucrose derivs. and 1 deriv. each of D-fructose and .alpha.,.alpha.-trehalose.

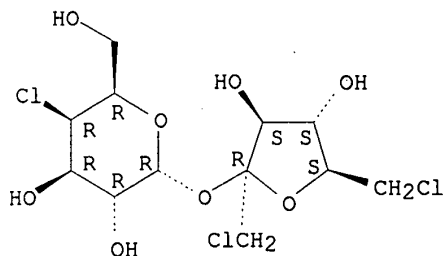
IT 56038-13-2P 69414-04-6P

RL: PUR (Purification or recovery); PREP (Preparation)  
(purifn. of, by semipreparative high-pressure liq. chromatog.)

RN 56038-13-2 HCAPLUS

CN .alpha.-D-Galactopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 69414-04-6 HCAPLUS

CN .alpha.-D-Glucopyranoside, 1,6-dichloro-1,6-dideoxy-.beta.-D-fructofuranosyl 4-chloro-4-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

